

Climate-Sensitive Management of Public Finances—“Green PFM”

Fabien Gonguet, Claude Wendling, Ozlem Aydin, and Bryn Battersby¹
August 2021

Summary

Public financial management (PFM) consists of all the government’s institutional arrangements in place to facilitate the implementation of fiscal policies. In response to the growing urgency to fight climate change, “green PFM” aims at adapting existing PFM practices to support climate-sensitive policies. With the cross-cutting nature of climate change and wider environmental concerns, green PFM can be a key enabler of an integrated government strategy to combat climate change. This note outlines a framework for green PFM, emphasizing the need for an approach combining various entry points within, across, and beyond the budget cycle. This includes components such as fiscal transparency and external oversight, and coordination with state-owned enterprises and subnational governments. The note also identifies key principles for effective implementation of a green PFM strategy: securing political backing for the reform and ensuring that basic PFM practices are in place; relying on a strong stewardship role of the ministry of finance; integrating the strategy within the existing PFM reform agenda; ensuring appropriate sequencing of green PFM reforms; and communicating to ensure buy-in from stakeholders and manage expectations.²

Introduction

Fiscal policies are a key element of governments’ integrated strategies to combat climate change. To be implemented efficiently, Nationally Determined Contributions (NDCs) resulting from the 2015 Paris Agreement should be translated into precise and granular government policies. Similarly, climate dimensions of Sustainable Development Goals should be reflected in countries’ development priorities and be incorporated into medium-term planning and annual budget allocation decisions. While regulation plays a key role, in a large majority of countries, climate commitments have already fed into domestic expenditure and tax policies, through various measures supporting climate change mitigation or adaptation (Box 1). The urgent and existential nature of the threats, their potential impact on the macroeconomic and macro-fiscal outlooks as well as the scope of the required policy changes make policies to fight climate change and increase resilience one of the biggest challenges of our times. The period of recovery from the coronavirus disease (COVID-19) pandemic could represent an important opportunity in the global response to climate change. While the sharp economic slowdown during the COVID-19 pandemic is expected to have only a small, temporary positive effect on

¹ This note was prepared under the overall supervision of Manal Fouad. The authors gratefully acknowledge contributions by Korlai Kirabaeva. The authors would like to thank Torben Hansen, Sailendra Pattanayak, and Carolina Renteria for their guidance in preparing this note, as well as the following IMF staff for their insightful review: Richard Allen, James Daniel, Guohua Huang, Manabu Nose, James Roaf, Natalia Salazar, Michelle Stone, Eivind Tandberg, and Tjeerd Tim (FAD); Saad Quayyum (SPR); Adil Mohammad (RES); Alissa Ashcroft and Olya Kroytor (LEG); Martin Schindler (ICD); Alejandro Guerson (WHD); Alexandre Balduino Sollaci, Wenjie Chen, Natalija Novta, and Sarah Zhou (APD); and Paul Seeds (PFTAC). The authors would also like to thank Adrian Fozzard (World Bank) and Thomas Beloe and Asad Maken (UNDP) for their helpful review and comments.

² A forthcoming How-To Note will expand on this Climate Note with more specific details on the framework and a wide range of existing country practices.

greenhouse gas (GHG) emissions, how countries tackle the post-COVID recovery—through infrastructure investment in particular—will shape the environment and the climate in the longer run (IMF 2020a).

Fiscal policies should be supported by sound public financial management (PFM) processes and frameworks to ensure their effective design and implementation. PFM is concerned with the laws, organizations, systems, and procedures available to governments to secure and use public resources effectively, efficiently, and transparently (North 1991). In a nutshell, PFM is “what makes fiscal policy work” (Hemming 2013); it is about the institutional and practical arrangements that can ensure that fiscal policies are optimally designed and implemented.

While the relationship between PFM and fiscal policy is valid for all policy areas and sectors, the importance and specificities of climate change call for the adaptation of existing PFM frameworks.

Arguably every single policy adopted by the government has a climate impact, be it direct or indirect. These effects may be significant and should be considered in the context of budget decision-making—not doing so can easily undermine climate commitments. This requires methodologies for climate impact assessment, procedures to ensure that these inform budget preparation and allocation, information technology (IT) systems to consolidate and manage information along the budget cycle, as well as transparency requirements vis-à-vis the oversight bodies, such as parliaments and supreme audit institutions (SAIs), financial markets, donors, and the general public—all of which are within the realm of PFM.

Green PFM means to gradually adapt existing PFM practices to make them environment and climate sensitive. The concept of “green PFM” can be defined as the integration of an environment- and/or climate-friendly perspective into PFM practices, systems, and frameworks—especially the budget process—with the objective to promote fiscal policies that are responsive to environmental and/or climate concerns. Green PFM is a notion akin to *green budgeting*,³ but with a wider scope, as it explicitly considers broader PFM functions that might go beyond the scope of the budget (such as coordination with other public sector entities or fiscal transparency).

Green PFM, as presented in this note, is concerned primarily with the integration of climate objectives into PFM practices. However, several countries (for example, France) have opted for considering broader environmental concerns in this approach—including the loss of biodiversity or prevention of pollution. The relevant PFM processes and frameworks are largely the same—the framework and principles underlying green PFM as presented in this note are also applicable to governments who are interested in broadening the focus beyond climate change. Green PFM bears a strong resemblance to other types of so-called priority-based budgeting approaches, which seek to mainstream specific priorities or concerns into PFM practices and processes. Cases in point are gender budgeting,⁴ and, more recently, SDG budgeting (for example, Ghana and Mexico) and well-being budgeting (for example, New Zealand). As for those other forms of priority budgeting, some key principles can be outlined that can help to integrate green concerns into the overall PFM framework.

³ According to the Organisation for Economic Co-operation and Development (see <https://www.oecd.org/environment/green-budgeting/>), “Environmentally responsive or green budgeting means using the tools of budgetary policy-making to help achieve environmental goals. This includes evaluating environmental impacts of budgetary and fiscal policies and assessing their coherence towards the delivery of national and international commitments. Green budgeting can also contribute to informed, evidence-based debate and discussion on sustainable growth.” Hence, green budgeting is designed to drive improvements in the alignment of public expenditure and revenue processes with climate and other environmental goals, and to mainstream an environmentally informed approach into the national and subnational budgetary frameworks.”

⁴ Gender budgeting involves integrating into the existing budget system additional tools to analyze the differential impact of governments’ budget on women and men, thereby translating the government’s commitments on gender equality into budgetary commitments. It focuses the impacts of public expenditures and revenue policies on women and girls, compared to men and boys, and analyzes whether they reduce, increase, or leave unchanged gender equality. See Albarran and others (forthcoming).

Box 1. Fiscal Policy and Climate Change

Governments play a critical role in addressing climate change, mostly through the design and implementation of an adequate and appropriately sequenced mix of mitigation and adaptation policies. Fiscal policy is a major lever, be it through carbon taxation, cash transfers to support those most affected by adaptation or mitigation, or supporting investment in clean and resilient infrastructure.

Climate mitigation policies are aimed at reducing greenhouse gas emissions. Carbon pricing—charges on the carbon content of fossil fuels or their emissions—is the most important mitigation instrument as it provides across-the-board incentives to reduce energy consumption and shift to cleaner sources of energy. It can be implemented either as a carbon tax or an emission trading scheme. To increase acceptability of higher energy prices, these could be complemented by sector-specific measures such as regulations and feebates. A comprehensive strategy could include targeted assistance (for example, direct mean-tested transfers and strengthening social protection systems) for low-income households, vulnerable workers, firms, and regions. And most of the carbon pricing revenues can be used to boost the economy through cutting burdensome taxes or funding productive investment (for example, linked to Sustainable Development Goals). To scale up global carbon pricing, the IMF has proposed a carbon price floor arrangement among large emitting countries.

Carbon pricing needs to be supported by public investment in clean energy infrastructure networks and critical technologies. For example, in the power sector, network infrastructure investment could cover electric vehicle charging stations and power grids to support electrification and cleaner energy generation. In the residential housing sector, targeted government support for energy improvements and the electrification of heating systems would improve energy efficiency. Investing in re-skilling and up-skilling of the workforce through active labor market policies and training would facilitate labor market reallocation toward green jobs.

Adaptation policies are needed to enable countries to build resilience and reduce vulnerability to weather hazards and climate changes. These include, among others, making infrastructure more resilient, strengthening early warning systems, improving dryland agriculture, and managing water resources better. Among various adaptation policies, investing in infrastructure resilience is by far the costliest, although it is also estimated to be essential in safeguarding inclusive growth (Global Commission on Adaptation 2018). Investing in resilient infrastructure involves upgrading new investment projects and existing assets to make them more climate resilient. Over the medium term, an annual investment of about ½ percent of GDP globally on average to strengthen public assets would be beneficial to address existing climate risks from floods and storms (Bellon and Massetti, forthcoming). For vulnerable countries, much larger investment is likely needed. Investment in adaptation, especially if efficiently undertaken, would reduce damage and economic disruption from disasters, lower disaster recovery spending, and provide a quicker rebound in economic activity.

Sources: Arregui and others (2020), Dabla-Norris and others (2021), Global Commission on Adaptation (2018), IMF (2019a, 2019b), and Parry, Roaf, and Black (2021).

A Brief History of Green PFM

Successful efforts to “green” the budget cycle were launched around a decade ago in a handful of countries. While the first few examples of green PFM practices can be traced to more than three decades ago in a few advanced economies,⁵ these initial efforts petered out and did not lead to far-reaching changes in the budget cycle. It was not until the late 2000s that concrete green PFM practices emerged, mostly in developing economies facing strong climate challenges, with support and impetus from development partners. The United Nations Development Program (UNDP) has a decade-long experience in supporting the implementation of

⁵ Already in the late 1980s and 1990s, some advanced economies tried to emphasize the role that the budget could play in furthering environmental goals. Norway introduced an Environmental Profile of the State Budget in 1989, and around the same time, France created a compulsory report (*jaune budgétaire*) on environmental protection appended to the annual finance law.

climate budgeting and climate tagging in some low-income developing countries (LIDCs), most notably in Asia (for example, Bangladesh and Nepal).

Results obtained in pioneering countries have been encouraging, fostering growing interest in green PFM. There is empirical evidence of the effectiveness of other types of priority-based budgeting in improving outcomes (for gender budgeting, see Chakraborty, Ingrams, and Singh 2019). However, given the relatively recent implementation of green PFM practices, there is only anecdotal evidence of their actual impacts, mostly on outputs—in Bangladesh, for instance, the climate change relevance of the national budget has increased since the first implementation of the climate budget in 2017.

In the last few years, green PFM has gained more exposure thanks to innovative global cooperation platforms. The World Bank's 2014 Policy Note "Moving Toward Climate Budgeting" provided a first tentative blueprint for the integration of green budgeting principles in the budget cycle. In 2017, the Organisation for Economic Co-operation and Development (OECD) launched the Paris Collaborative on Green Budgeting,⁶ which has since produced an inventory of building blocks for green budgeting and of successful country experiences, with a focus on advanced economies. In 2019, the Coalition of Finance Ministers for Climate Action⁷ was launched to foster collective engagement for a transition toward low-carbon and resilient development. Finance ministers from over 60 countries have endorsed the six non-binding Helsinki Principles, which "promote national climate action, especially through fiscal policy and the use of public finance." Among these, Principle 4 focuses on "taking climate change into account in macroeconomic policy, fiscal planning, budgeting, public investment management, and procurement practices." The IMF is an institutional partner in the coalition and has stepped up its engagement on climate issues (see Box 2).

Box 2. The IMF's Recent Engagement in Areas Related to Green Public Financial Management

- The joint IMF-World Bank Climate Change Policy Assessment tool, which was implemented in six small countries, also included a public financial management dimension. A successor climate assessment diagnostic, the Climate Macroeconomic Assessment Program, is currently developed. The Climate Macroeconomic Assessment Program is similar to the Climate Change Policy Assessment in structure and covers climate risk and preparedness, national strategy, mitigation, risk management, adaptation, macroeconomic implications of climate policy, and national processes (public finance management).
- The Fiscal Affairs Department's recent analytical outputs include book chapters on how to build resilience to natural disasters and to climate change through infrastructure governance practices (Schwartz and others 2020), a note on how to green the post-COVID-19 recovery (IMF 2020a), and a paper on access to green finance (Novta, Preston, and Weerathunga, forthcoming).
- In terms of capacity development, recent initiatives include a seminar on the role of fiscal policy and PFM in strengthening climate resilience in small island states (2019) and the design of a Public Investment Management Assessment module on climate change (IMF [forthcoming]).

Source: Authors.

⁶ <https://www.oecd.org/environment/green-budgeting/>

⁷ <https://www.financeministersforclimate.org/>

Green PFM practices, however, remain nascent in most countries, including in advanced economies.

According to the results of a recent OECD survey on green budgeting practices (2021a), 60 percent of the OECD membership are not implementing any green budgeting. Only 14 countries are currently implementing some form of green budgeting, with most carrying out ex ante or ex post environmental impact analyses to inform budget decisions, and only two countries adopt a green perspective in their performance budgeting framework (Ireland, United Kingdom). About one-quarter of the 31 countries that have undertaken the IMF's Fiscal Transparency Evaluation publish quantitative information about environmental and climate risks. This scarcity of green PFM practices in many countries so far could be explained by a lack of awareness, limited appetite for changes to the budget process, and, in the case of LIDCs, preexisting PFM capacity limitations and uncertainty as to where to start.

At the same time, governments are showing increasing interest in green PFM. Given the growing urgency of tackling climate change and of designing sustainable post-COVID recovery measures, there is growing interest in adopting at least some green PFM practices. According to the aforementioned OECD survey (2021a), all but one country currently implementing some form of green budgeting want to develop it further, and five additional countries intend to introduce it. Green PFM reforms can foster better access to climate finance, especially in countries most immediately exposed to climate-related disasters and in LIDCs (IMF 2016, 2019c; Novta, Preston, and Weerathunga, forthcoming). They are an important feature of Climate Change Financing Frameworks adopted with UNDP support notably in several Asia-Pacific countries in the past decade (for example, Bangladesh, Indonesia, and Pakistan; UNDP 2017). Many LIDCs have experimented with green PFM and/or climate tagging for longer than most advanced economies, with the support of development partners.

A Holistic Approach to Green PFM

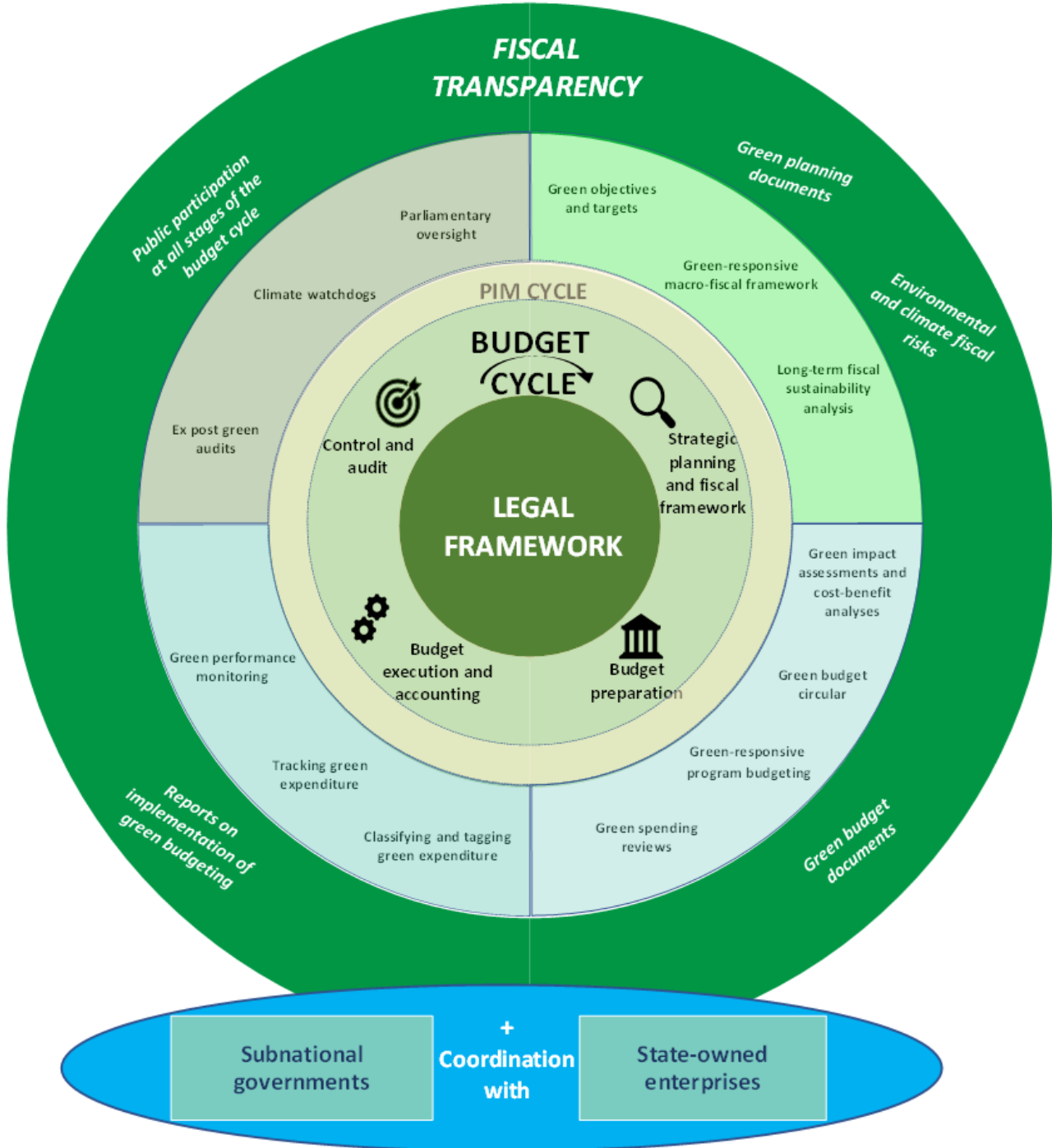
The holistic approach to green PFM presented in the rest of this note aims at providing a comprehensive picture of entry points and areas of interaction within, across, and beyond the budget cycle. Such a holistic approach offers opportunities for deeper integration of climate commitments into PFM frameworks. Figure 1 summarizes the proposed green PFM framework, which is applicable to all countries interested in green PFM reforms, regardless of their capacity environment. This note first examines entry points of climate priorities within the budget cycle, and then looks at important practices beyond the scope of that cycle (in particular pertaining to state-owned enterprises and subnational governments).

Green PFM does not require a novel approach to PFM, but rather an adaptation of existing PFM processes and tools. Similar to gender budgeting, the implementation of green PFM does not require new and separate PFM systems as that could potentially fragment and undermine the effectiveness of the core PFM and budget processes. It rather aims at leveraging existing PFM systems and tools of budgetary policymaking to achieve climate commitments and other green priorities.

Entry Points of Climate Priorities within the Budget Cycle

The typical budget cycle is envisioned as a four-step cycle, anchored by a legal framework. The four steps are the setting of strategic and fiscal policy goals and targets, the preparation of the annual budget and its approval by the legislature, the execution of the approved budget and the production of accounts and financial reports, and the independent oversight and audit of the budget. The public investment management cycle is integrated with the budget cycle, following a similar pattern—planning, allocation, execution, and control (Box 3); the IMF can support governments in this endeavor through the forthcoming climate change module of the Public Investment Management Assessment (IMF, forthcoming).

Figure 1. A Holistic Approach to Green Public Financial Management



Source: Authors.

Note: PIM = public investment management.

Box 3. Public Investment Management through the Budget Cycle

Climate-aware public investment is key for the transformation to a more inclusive, green, and resilient economy. At each step of the public investment management cycle, there are key public financial management practices that can support the achievement of green objectives. Managing public investment should integrate climate considerations to guide the multiyear investment planning and procedures for

project selection and appraisal, including assessment of climate risks and vulnerabilities. International experience shows that countries tend to be better at integrating climate change at the planning stage than at the implementation stage. It is therefore important to target climate mainstreaming efforts through the project development cycle. Coordination across different sectors and levels of government is also essential for climate relevant public investments.

Sources: IMF (forthcoming); and authors.

Legal Framework

The legal framework underpins the budget cycle and PFM practices, and therefore plays a key role in embedding climate objectives into PFM. The legal basis for green PFM practices varies across countries, reflecting differences in legal and political traditions. Many countries have enshrined environment-related rights and protections in their constitution including the right to a sound environment (for example, Hungary, South Africa, and Turkey).⁸ Countries often enact environmental laws to give statutory meaning to the rights given by the constitutional provisions or enforceable international treaties (for example, Argentina and Brazil). Countries have also started to enact dedicated climate change framework laws to outline mitigation and adaptation objectives, specify mechanisms to achieve and monitor these objectives, as well as assign institutional duties and powers to this effect (for example, Kenya, Philippines, and the United Kingdom). However, only a few countries include PFM elements in their climate laws, mostly by linking climate change with the annual budget process (for example, Sweden). Some countries have amended their existing public finance laws, providing good examples of more comprehensive approaches in integrating green practices into the PFM legal framework (for example, Mexico and New Zealand).

The effectiveness of the green PFM practices ultimately depends on their being grounded in law. While several green PFM practices can be implemented through administrative instruments such as budget circulars, their continued application will be on an ad hoc basis if not sustained by laws. Providing strong legal foundations for green PFM practices can reduce the risk of *reversals* arising from changes in the economic or political environment and help achieve more efficient resource allocation and enforceability. The experience from gender budgeting also shows that a robust legal foundation can be an effective tool to achieve green objectives. Key issues to be covered by a primary law include providing a clear legal mandate for the ministry of finance (MoF), defining the key terms (for example, green, mitigation, adaptation, and climate-relevant expenditures), outlining objectives and institutional arrangements (for example, the role and responsibilities of line ministries, the legislature, and the SAIs), and defining key requirements to implement green practices. Details of procedures and the roles and responsibilities within the government for adopting and implementing green PFM practices at each entry point in the budget process could be delegated to the secondary legislation.

Adjustments may be needed to countries' legal frameworks to establish rules and procedures for green PFM practices. A sound PFM law with a broad coverage can play a critical role in helping achieve green goals in a transparent and accountable manner. Regardless of legal traditions, a clear and enabling legal framework can support green PFM practices at each entry point of the budget process and provide flexible mechanisms when unforeseen spending and other types of government support are needed for those adversely affected by climate and environmental events.⁹ Countries should assess their existing legal framework and adjust it accordingly to ensure that clear criteria, definitions, procedural rules, and safeguards are in place for the design and implementation of green PFM practices. In particular, the overall framework should establish the link between the fiscal framework and the national development plan, sectoral plans, and annual budgets, as well as other budget initiatives, such as gender budgeting.

⁸ Environmental rights are composed of substantive rights (for example, rights to a healthy environment, to life, and to water) and procedural rights (for example, rights of access to information and public participation). As of 2017, 150 countries have enshrined environmental protection or the right to a healthy environment in their constitutions (United Nations Environment Programme 2019).

⁹ These mechanisms may include supplementary budgets, contingency reserves, disaster management laws, escape clauses, etc.

Stage 1. Strategic Planning and Fiscal Framework

Green priorities and concerns should be taken on board during the strategic planning and fiscal framework phase, which sets the broad policy framework and overall fiscal constraint. The budget process should be underpinned by a planning stage, which defines a national development strategy and reconciles this strategy with overall resourcing constraints. This often takes the form of a medium-term fiscal framework (MTFF) outlining the main macroeconomic assumptions and the macro-fiscal baseline. Green priorities/concerns—both on the revenue and on the expenditure side—should be incorporated at this early stage, notably with respect to the content of the overall development plan or strategy, the identification of high-level mitigation and adaptation targets, the management of transition risks, and the definition of the macroeconomic scenarios.

The national development strategy should incorporate climate-related targets and objectives for the country. NDCs, as well as the climate-relevant Sustainable Development Goals, are examples of long-term objectives and quantitative targets on climate adaptation and mitigation that should be derived and included in these strategic planning documents. Many countries (for example, China, Indonesia, Ireland, Nepal, and South Africa) set environmental and climate targets and objectives in their national development strategies and plans. The national and sectoral development strategies and associated medium-term investment plans should be realistically aligned with these targets and updated periodically as the NDCs are revised. National adaptation plans are also important tools to prioritize adaptation investments and cost adaptation strategies, and identify financing needs (for example, Brazil, Cameroon, Sri Lanka, and Togo).

The MTFF should provide an environmentally and fiscally sustainable pathway to achieving long-term targets. An MTFF is a top-down specification of a government's aggregate resource envelope and serves as an interface between the long-term strategic goals of a national plan and the immediate spending, revenue, and financing plans contained in a budget. GHG emissions are one example of a green target that could be integrated in this process, because they are closely linked to both economic activity and fiscal policy. Macroeconomic forecasting and modeling that incorporate climate and environmental impacts can inform the preparation of the fiscal strategy and the budget (for example, Sweden's Climate Report and Denmark's Green Reform project). The fiscal trajectory specified in a MTFF should be consistent with the findings of debt sustainability analysis, which should cover the effects and risks related to climate, including through scenario analysis. This would inform policymakers in the implementation of risk mitigation measures. The MTFF can also be a useful device for estimating and communicating the budget spending gap that would achieve emission reduction targets in the medium-term (for example, Indonesia's Mitigation Fiscal Framework).

The management of fiscal risks related to climate change is an important dimension of fiscal transparency and should inform the fiscal strategy. Climate change is creating new and diverse risks that governments need to analyze and manage to ensure the fiscal framework remains credible. These risks include (1) the uncertainty of the costs associated with mitigation and the global transition to a low-carbon economy, including side effects for a given country of measures adopted by other countries (for example, impact of a possible border adjustment tax on exports to important trade partners, or of restrictions on air travel on the tourism sector); and (2) the potential costs of adaptation (both preventive and recovery) due to the increased prevalence of natural disasters, the expected rise in sea levels and long-term changes in weather patterns, and the exposure of infrastructure assets to these factors. To estimate these costs, governments can start with historical analyses of losses from disasters, before deploying more forward-looking methodologies. Results should be integrated in the fiscal strategy and medium-term budget frameworks, and taken into account in debt management, as climate-related risks and policies can create large borrowing needs. Budget documentation should also include a review of fiscal risks related to climate change and natural disasters, ideally as part of the overall fiscal risk statement (for example, Philippines and the United Kingdom). Governments should also have risk management strategies in place to address climate-related fiscal risks, which can include enhancing disaster preparedness, creating fiscal buffers, ensuring budget flexibilities (for example, contingencies for natural disasters, provisioning), and using risk transfer instruments (for example, insurance).

Depending on country commitment and capacity, incorporating green aspects in long-term fiscal sustainability analysis and in the design of fiscal rules can also be considered. Climate change, like other important structural changes (for example, population aging), should be factored into long-term fiscal sustainability analysis, at least in a qualitative manner (for example, Switzerland and the United Kingdom). This analytical exercise can support the rationale for early climate action by helping to assess savings drawn from early mitigation and adaptation efforts as opposed to a delayed response. The fiscal framework could also be used to define medium-term fiscal targets or anchors that are explicitly consistent with the costing of green priorities, such as the reduction of GHG emissions, while still ensuring fiscal discipline. At the same time, fiscal rules should be flexible enough to allow for a fiscal response in case of a climate-change-related emergency. Fiscal rules could for instance be accompanied by an escape clause that allows for their suspension in the wake of large natural disasters (for example, Brazil, Germany, and Maldives).

The integration of green priorities into strategic plans should be an iterative process, taking into account the size of the financing gap and the need for a green financing strategy. Planning documents should be linked to this strategy, thus contributing to the credibility of objectives, outcomes, and targets. Meeting ambitious climate goals requires careful costing of actions, domestic resource mobilization, and the systematic weigh-in of all sources of finance, including traditional loans, grants, debt swaps, national and international climate funds, carbon markets, green bonds, and insurance instruments.

Stage 2. Budget Preparation

The budget preparation phase is crucial for the inclusion of green priorities and concerns. It can be defined as a collaborative process led by the MoF that aims at producing the optimal resource allocation across sectors and policies under an overall fiscal constraint. The budget preparation process addresses the next fiscal year but should ideally be underpinned by the preparation of a medium-term budget framework with a time horizon of three to five years. Budget documentation is a critical vehicle for communication of objectives and policies, including climate-related ones (Box 4).

The budget circular is a key instrument to send a clear signal on the importance of climate issues. The budget circular, also known as budget call circular, is arguably the single most important guidance document produced by budget departments. It is the key vehicle for operational guidelines and targets to be shared with sectoral ministries prior to budget preparation. Providing environmental or climate-related instructions in the circular (for example, stating that climate change will be a major criterion for budget allocation, requiring the use of a consistent set of climate related assumptions such as carbon dioxide prices or GHG-emission factors when assessing policies, asking line ministries to identify climate-friendly investment projects or link spending to strategic environmental priorities, or to justify all new policy proposals in terms of their climate impact, etc.) compels line ministries to take them into account during the preparation of their budget submissions, and helps the MoF gather useful information to factor in environmental concerns in budget decisions (for example, Bangladesh, Burkina Faso, France, and Pakistan).

Assessing the effects of new policy measures on climate change prior to their adoption is a powerful tool to steer fiscal policymaking toward greener goals. This may be mandated by legislation, which requires the systematic inclusion of the environmental and climate dimension in impact assessments and cost-benefit analyses (for example, France). In the same vein, environmental impact assessments should inform the process for the appraisal and selection of public investment projects, integrating a strong climate dimension for the sectors which have the most impact on GHG emissions (infrastructure, transport). Assessing climate impacts in a holistic manner may be challenging and necessitate strong assumptions; transparency on these assumptions is critical to ensure credibility of the impact evaluations.

This focus on new policies can be usefully complemented by the “greening” of expenditure review processes. Focusing on new measures or new projects allows only for incremental changes. This is why a number of countries, mostly in the OECD, have found it useful to develop spending review processes as a mechanism to identify and adopt savings measures that can be incorporated into the budget (for example,

Ireland’s 2018 National Biodiversity Expenditure Review). Hence, using this mechanism to analyze spending (including tax expenditures) not only in terms of value for money but also through the lens of contribution to environmental and climate goals can be a powerful tool.

Tagging climate-related expenditure in the budget preparation phase has gained traction over the last decade (UNDP 2019; OECD 2021b). Giving an overall picture of climate-related expenditure and tax expenditure helps highlight the true importance of climate change concerns in resource allocation and monitor progress from one year to the other. A green budget tagging does precisely that by assessing each individual component of the budget on the basis of its climate (and/or environmental) impact and giving it a “tag” according to whether it is helpful or harmful to green objectives. Thanks to intensive technical support from several development partners, climate tagging is more widespread in LIDCs, notably in Asia (for example, Bangladesh, Indonesia, Nepal, and Philippines), but is increasingly recognized as an important tool including in the OECD and European Union (for example, France and Ireland), despite the methodological limitations linked to the absence at this stage of a commonly accepted classification of expenditures that are beneficial or detrimental to the environment.

The green dimension can be “mainstreamed” into program and performance budgeting processes. By allocating budget resources to policies (rather than line items) and by using output and outcome targets to inform this allocation, program and performance budgeting allow for decisions that better respond to development objectives. Program-based budgeting frameworks are hence an important enabler in a green PFM reform strategy. Approaches developed for gender budgeting are a useful reference (for example, Austria)—gender-specific programs, or full integration of gender priorities through gender performance indicators defined under each program (for example, by equipping each program with indicators reflecting its impact on GHG emissions).

The growing importance of the multiyear dimension in budget preparation means that efforts should be made to incorporate “green” aspects not just in the annual budget but also in the medium-term budget framework. The annual budget, which has a narrow focus, is inadequate to capture the long-term impact of climate change. Green concerns must also be fully reflected in the medium-term budget, which outlines expenditure and revenue plans over several years per ministry or policy area (for example, Bangladesh).

Box 4. Fiscal Transparency and Green Public Financial Management

Fiscal transparency, as defined notably in the IMF’s Fiscal Transparency Code, refers to the comprehensiveness, clarity, reliability, timeliness, and relevance of public reporting on the state of public finances. It is critical for effective fiscal management and accountability. This helps to strengthen the credibility of climate policies by ensuring legislatures, markets, and citizens have the information they need to hold the government accountable for the commitments and targets they announce and understand the climate impact of fiscal policies.

There are numerous entry points for climate elements related to fiscal transparency at each stage of the budget cycle. Credible green PFM requires that the climate commitments, targets, forecasts, costs, outputs, and outcomes be transparently reported and available in a clear and timely manner to the civil society and the public, while giving the public an opportunity to participate in shaping the budget choices. This means, for instance, that budget documentation should include evidence on the environmental impacts of fiscal policies and the link between fiscal policy and the environment. The positive and negative environmental impacts of the forthcoming budget, as well as analysis of the fiscal risks related to climate change and natural disasters, should be clear and readily available in the budget documentation. Reports on the implementation of climate policies and ex post climate impact evaluations should also be made accessible to the public.

Public participation should also be encouraged at all stages of the budget cycle. Public participation is increasingly recognized as a key element of fiscal transparency because it helps to strengthen the link

between the budget and outcomes for citizens, and also provides an accountability mechanism. Public participation in the context of green PFM can build on existing mechanisms, including the inclusion of green outcomes in participatory national planning mechanisms and prebudgeting consultations, or public consultations on social and environmental impacts of the budget.

Source: Authors.

Stage 3. Budget Execution, Accounting, and Reporting

The budget execution phase starts after the budget law is enacted. During the execution of the budget, governments allocate and spend resources on the policies and programs approved in the budget, limited by the amount of appropriations voted by the legislature.

In this phase, keeping track of and reporting on climate-related expenditure is an important part of an effective green PFM system. Climate tagging can only reach its potential when used both for budget formulation and during budget execution. Tracking of green expenditure should ideally be factored in from the outset when putting a tagging system in place. Options include adapting the chart of accounts to include a green or climate coding. The chart of accounts provides a coding structure for the classification and recording of relevant financial information (both flows and stocks) within the financial management and reporting system and constitutes as such a critical element of the PFM architecture. Governments should ensure that the financial management information system, the IT backbone of the expenditure chain, has adequate functionality for accounting and reporting of climate-related expenditure. Some countries may also choose to rely on ad hoc reporting by line ministries to track actual green spending. The reporting should allow direct comparison between budget and actuals (for example, Indonesia's Climate Expenditure Report and the Philippines' Climate Budget Reports). Depending on the degree of performance information available, the reports may also feature outputs and outcomes during the budget year.

As the number of climate-change-related emergencies may increase in the years to come, governments should look to strengthen the in-year responsiveness of PFM systems while preserving financial integrity. Risk management mechanisms (see Stage 1) can help reduce exposure to fiscal risks related to climate change and mitigate their potential impact. However, governments might still have to urgently reprioritize spending during the year, possibly by swiftly adopting a supplementary budget, and ensure short-term cash availability as well as business continuity. Preparing PFM systems to the challenges associated with emergency responses is critical to tackling climate-related emergencies—as was the case at the start of the COVID-19 pandemic (IMF 2020b).

Stage 4. Control and Audit

Control and audit mechanisms should be used to examine, measure, and monitor the efficiency and effectiveness of climate policies. There is a usual distinction between internal control and audit, performed by the MoF, as the overall controller of budget systems and processes, and by line ministries and agencies on the one hand, and external audit, performed by the SAI on the other hand. All these stakeholders should be involved in controlling and evaluating the climate impact of government policies.

- *Internally*, line ministries and agencies should monitor and assess the climate outputs attached to their budget actions. Internal audit or inspection bodies, especially within the MoF, can also adopt a climate focus in their work program.
- *Externally*, the SAI could assess compliance of government programs/projects and transactions with the climate-related objectives and requirements, either by undertaking a dedicated audit (for example, Bangladesh's climate performance audit methodology) or as part of existing audit types (for example, Canada). The parliament, as the main oversight body, could examine the reports of SAI and related

evaluation reports on green or climate strategies, and ask for corrective measures in case of any deviation from the approved target (for example, Nepal and Pakistan).

Specific expertise needs to be built up in order to successfully integrate climate change in ex post evaluation and audit methodologies. Ex post evaluations or audits of the impact and effectiveness of climate-related policies, carried out by the government or performed by a country's SAI, should assess if the impacts (for example, GHG reductions) are in line with the stipulated climate goals in NDC and development plans. Performance audits, which try to specifically assess the link between policy outcomes/outputs and the means affected to a given policy, can also include climate or environmental considerations. In both cases, auditors are required to go beyond traditional auditing skills and develop an understanding of the concepts related to climate change; this also comes downstream in the realm of green PFM reforms. This might explain that such practices have only been initiated in a few countries with extended green PFM experience such as Bangladesh. The International Organization of Supreme Audit Institutions has recognized that climate change audit requires deep understanding of the technical details for auditors to design an effective audit approach.

Countries can support the oversight of climate policies by setting up a dedicated independent body. This body is typically an independent government body such as a national climate change council, committee, or panel (for example, Ireland's Climate change advisory council and the Philippines' Committee on climate change). Members can include a mix of climate experts, scholars, and former or current government officials. The key to success for these institutions is to have a formal mandate and that it is seen both by the government and the public as an objective source of information, analysis, and advice to the government on the consistency of current policies with government targets and commitments.

Green PFM Functions Beyond the Scope of the Budget Cycle

As a complement to the budget-cycle-based approach, a few PFM areas with broader scope are also important in the context of a successful green PFM strategy. This includes aspects such as coordination with state-owned enterprises (SOEs) and with subnational governments (SNGs).

Within the public sector, the central government's budget is not the sole contributor to achieving green and climate objectives. Depending on the institutional setting, SNGs and SOEs may be at the source of a substantial part of GHG emissions and can play a significant or even a major part in the delivery of public services and in the construction of infrastructure. Hence, it is important that they take actions toward green objectives. As a start, all entities of the public sector should be associated to the preparation of national and sectoral strategies to ensure a common understanding on their role in implementing them, and report regularly on their performance against these green objectives. In addition, many of the entry points within the budget cycle identified in this note are applicable to SNGs' own budget cycles. However, a critical hurdle is the overall weak PFM capacity at the subnational level, especially in emerging markets and developing countries. Central governments have a responsibility in enabling PFM reforms to trickle down to local levels through a capacity development strategy.

The role of SOEs makes them highly relevant in terms of achieving green objectives. SOEs can be among the largest companies, especially in emerging markets and in climate-relevant sectors such as electricity, oil, and gas. And public financial institutions can be significant providers of financing for development. While a lot can be achieved across-the-board through regulations applicable to all businesses and not just to SOEs, the central government, through its financial relationship with SOEs (as a shareholder, as a provider of transfers and subsidies, etc.), has a key role to play in ensuring their full commitment to climate objectives. In this respect, the government's ownership policy document is a useful vehicle for the central government to convey the cross-cutting importance of green objectives in the way the state portfolio is managed. Climate efficiency can also be explicitly set as a criterion in the technical and financial appraisal of SOE investment plans, to be reviewed by the government. Climate-change-related measures could also be part of the SOE's quasi-fiscal activities (that is, operations pursuing a public policy objective that may impinge on

profit). If so, it should be made explicit and the SOE should be appropriately compensated through transparent budget arrangements.

The central government can create incentives for SNGs to deliver their share of the green strategy, while not infringing on their level of financial autonomy.¹⁰ Even though SNGs enjoy different degrees of autonomy (both institutional and financial), the central (or federal) government may—depending on fiscal decentralization arrangement and political economy constraints—encourage or even force SNGs to follow green or climate-friendly objectives. For instance, part of the fiscal transfers to SNGs can be explicitly tied to low-carbon investments or green policies (for example, Indonesia). The central government can also impose green requirements on SNGs through reporting obligations and monitoring of performance indicators (for example, China). Equalization mechanisms could also play a role in ensuring that the SNGs that are more vulnerable to climate change, because of their location for instance, receive additional resources.

Guiding Principles for a Successful Green PFM Reform Strategy

A strategy is necessary to successfully implement green PFM reforms. Entry points to integrate climate priorities into the budget process are many. Taking advantage of all entry points at once to implement green PFM is not realistic, particularly in LIDCs facing tight capacity constraints. All governments interested in green PFM reforms should, early on, make strategic decisions on which practices they wish to prioritize, consistent with their national priorities and level of capacity. They should also know who to involve and how to plan and monitor their implementation ahead, and capacity development needs should be identified and tackled, possibly supported by development partners, think tanks, and/or academia. High-level support and commitment to reform are crucial to the success of the strategy. Existing diagnostic tools, such as the upcoming IMF's Climate Macroeconomic Assessment Program, the UNDP's Climate Public Expenditure and Institutional Review, or the climate-responsive Public Expenditure and Financial Accountability can help governments identify green PFM reform priorities and design a realistic reform strategy.

Five guiding principles can be proposed for the successful design and implementation of a green PFM reform strategy. It is recommended for all countries to follow these principles, regardless of the priorities laid out in the strategy or the level of capacity in the country. They are, however, general in nature and do not preclude the need for a country-specific approach to green PFM reform, depending in particular on the vulnerability to climate change or the level of sophistication of the existing PFM system.

Principle 1. Several prerequisites are necessary for successful green PFM reforms.

“Greening” PFM systems makes sense only if the basic elements of a functional PFM system are in place. Priorities in this respect are ensuring basic financial compliance, with a robust budget preparation and budget execution processes, ideally underpinned by a functional financial management information system. Such fundamental PFM features are also required to access climate finance (such as the Green Climate Fund; see Novta, Preston, and Weerathunga, forthcoming). It is critically important that countries ensure these prerequisites are in place, especially in low-capacity countries that are particularly vulnerable to climate change. Further, it would be counterproductive to strive to implement sophisticated green PFM practices in a country where, for example, there are large and systemic expenditure overruns each year, leading to massive changes in the composition and breakdown of expenditure over the budget year. In such a case, the priority should be to reach a basic standard of PFM performance. There are, however, opportunities to incorporate some green PFM practices as the core systems are developed (see Principle 3).

¹⁰ In some countries (particularly in federal systems), states have started implementing green PFM practices ahead of the central government (for example, India and Indonesia).

Strong political backing and ownership is even more necessary than for a standard PFM reform agenda.

To some extent, improving the overall PFM framework to enhance its effectiveness and efficiency is the “core business” of a MoF. Political buy-in is necessary both to overcome resistance from other stakeholders and to induce them to spend some time and energy on designing and implementing reforms rather than on current affairs. However, the MoF has a direct stake in the changes, and the reform impetus may be to some extent self-sustaining. This is not the case with respect to green PFM reforms, as incorporating “green” concerns into the PFM system is not a natural part of the mandate of the MoF. Hence, the MoF will move only if there is a clear political signal. Political leadership is important, particularly at the beginning of the reforms, to embed green PFM tools in the legal framework and successfully implement them. Policy documents reflecting green or climate commitments can also be instrumental in aligning green PFM with the existing PFM framework or ongoing PFM reforms. For example, in Bangladesh, the MoF published a Climate Fiscal Framework (CFF) providing the foundation for pursuing a climate-inclusive PFM reform agenda.

Some degree of “green” expertise needs to be developed for key actors in the PFM processes. Staff in the MoF are usually not climate experts; however, they cannot rely solely on outside expertise from the ministry of environment, which will have very limited grasp of the constraints of PFM processes. A core nucleus of staff with some degree of expertise on climate change/environmental topics needs to be set up within the MoF. This will either require additional training for existing MoF staff, hiring staff from the outside, or a mix of both. Creation of this expertise has to be complemented with a strategy to build capacity and explain the new tools to other stakeholders both within the MoF and in other line ministries and agencies. For instance, the Nepal MoF provided specific training on climate change to the staff of its newly created Climate Change Finance Unit.

Principle 2. While green PFM reforms constitute a whole-of-government undertaking, the MoF as the custodian of public resources should be the primary driver.

The MoF has to be solidly in the driver’s seat of green PFM reforms, while coordinating with relevant line ministries. As climate change is a cross-cutting policy area, green PFM reforms should involve a broad array of stakeholders, including line ministries—with the ministry of environment/climate at the forefront, the legislature, and the SAI. The role of ministry of environment/climate is particularly important in defining climate-sensitive outputs and performance indicators. However, only the MoF has the requisite knowledge and skills to instill green practices into PFM processes and the overall vision of the tools (budget legislation and regulation, manuals and guidance documents, IT systems) that may need to be adjusted for this purpose. This is why the MoF is best placed to coordinate the dissemination of new green PFM practices across all stakeholders, including line ministries and agencies. Furthermore, thanks to its central function in the budget process, the MoF also has the institutional leverage to require compliance by line ministries. Line ministries, on the other hand, are best placed to bring the technical expertise to assess policy adequacy and impact.

This central role of the MoF also means that it can assess what changes in budget cycle are realistically possible without hampering the overall effectiveness of PFM processes. The budget preparation process, in particular, is bound by very tight (often constitutional) institutional and time constraints and involves multiple stakeholders with competing interests. One of the risks of green PFM is to contribute to a “Christmas Tree” approach whereby the budget preparation process becomes more complex and even unmanageable because it wishes to incorporate more information. The MoF is best placed to avoid falling into this “complexity trap” and keeping PFM processes manageable.

Principle 3. Green PFM reforms should be integrated with the existing PFM reform agenda.

Green PFM reforms should be dovetailed into the overall PFM reform agenda to ensure they are mutually reinforcing, whatever the level of capacity. For example, introducing program budgeting can provide an avenue to improve assessment of environmental outputs and outcomes. Likewise, strengthening fiscal risk management and disclosure can enable an increased coverage of environmental risks. In more advanced systems, adopting an overall public sector balance sheet approach may similarly improve the ability to track changes in asset values linked to environmental events.

Moreover, managing green PFM reforms would draw upon the same set of skills as the design and implementation of other PFM reforms. It requires deep knowledge of PFM systems and processes, good project management skills, change management capabilities, and a capacity to prioritize and sequence specific PFM measures. These are all skills that are relatively scarce and usually located in a dedicated unit, committee, or taskforce within the MoF in charge of steering the PFM reform agenda. The responsibility for green PFM reforms should be assigned to the same unit to ensure consistency with other PFM reforms and harness scarce project management skills that have already been put to good use.

Principle 4. Countries should look for an appropriate sequencing of green PFM reforms.

Countries should prepare sequenced action plans for the implementation of green PFM reforms. These action plans should identify the key stakeholders in charge of each action and a precise sense of the timeline for their implementation. The timeline should be updated on a regular basis by the body in charge of coordinating the reform, based on actual progress and discussions with relevant stakeholders. Action plans should be realistic, tailored to each country's specific circumstances (for example, geographical, economic, existing PFM capacity).

It is logical for governments to start with green PFM reforms along the upstream part of the budget cycle, before moving downstream. Developing the capacity to assess and analyze green or climate impacts of fiscal policies should be the immediate priority to kickstart a green PFM reform process. Similar to gender budgeting reforms (Public Expenditure and Financial Accountability 2020), green PFM reforms should ideally first focus on actions fostering awareness among agencies and institutions and on the development of methodologies for the production of ex ante green impact assessments and analyses, while adapting the legal framework. In the next phase, governments can move to the downstream part of the budget cycle (for example, measuring actual results and effects and comparing them with ex ante targets and objectives). Once confidence in the new tools and processes has been sufficiently built up, governments can gradually be made accountable on their performance relative to their initially set targets and objectives. This general process does not preclude the possibility for governments to take advantage of opportunities opened by existing PFM practices or ongoing PFM reforms, to focus on low-hanging fruits at first, or to prioritize practices that could attract climate financing. Countries with experience in other types of priority-based budgeting, such as gender budgeting, may be able to fast-track the implementation of certain practices.

It can be beneficial to roll out green PFM reforms gradually, starting with a few pilot ministries or agencies or with a limited set of new practices. Taking the time to test new processes and frameworks can ensure their operability and apply course correction before fully rolling them out. In countries with across-the-board capacity constraints or with large differences in capacity between ministries, opting for a gradual rollout, starting with a few pilot ministries or agencies, for instance with large environmental footprints or social impacts, would allow to progressively build up skillsets over time. Countries such as Bangladesh, Indonesia or Nepal have started implementing green budget tagging in a small number of pilot ministries with relatively high "green" stakes before a wider rollout. Implementing a reform in only the most relevant ministries could also be a cost-effective solution, especially in countries with weak capacity and limited resources. Also, countries should avoid overburdening existing systems and processes by greatly expanding the number of strategic priorities, and rather focus on the critically important priorities and mainstream them, in line with their institutional capacity and resourcing.

Principle 5. Communicating on the progress of green PFM reforms is important to ensure buy-in from all stakeholders and manage expectations.

Communications on green PFM reforms and gathering feedback early on is important to gradually build awareness and buy-in among internal and external stakeholders. Initial consultation meetings and workshops can be helpful to associate internal as well as external stakeholders to the design of the reform strategy while training them on its basic objectives. There is value in consulting with the legislative branch and

civil society while designing the reform strategy to understand their concerns and priorities, especially from the standpoint of fiscal transparency.

The MoF can make use of a broad spectrum of communication tools to provide updates on the reform.

Internally, the structure in charge of steering the reform should provide regular updates on the reform efforts to the various stakeholders. Useful practices for the dissemination and exchange of information internally include the organization of ad hoc steering committee or working group meetings on the reform itself, as well as meetings and conferences held as part of the budget process itself. Externally, governments may choose to leverage existing documents (progress reports on PFM reforms, green strategies, section in the citizen budget, etc.) to communicate on the progress of the green PFM strategy or produce ad hoc progress reports. This also provides an opportunity for evaluation of reform progress and readjustment of reform plans as needed.

Conclusion

Green PFM can be a powerful tool to pursue and achieve climate-sensitive goals. The holistic framework described in this note can help ask the right questions and identify the key steps in pursuing a green PFM strategy. However, implementing such a strategy can be a long journey and a series of conditions have to be met: ensuring that the basic elements of a functional PFM system are in place, strong leadership of the MoF and clear linkage with the overall PFM reform agenda, smart sequencing of reforms, real political ownership, as well as good communication to stakeholders. The Fiscal Affairs Department stands ready to provide capacity development support to governments of IMF member countries, at their request, on the development and implementation of a green PFM reform strategy.